CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

What is claimed is:

1. (Original) A turbocharger control system comprising:

a turbocharger comprising:

a compressor and turbine attached to opposite ends of a common shaft disposed within a center housing, the center housing comprising a bearing assembly disposed around the shaft, and an oil passage to the bearing assembly for providing lubricating oil thereto during turbocharger operation,

an electric motor positioned around the shaft for effecting rotational movement of the shaft, and

an oil pressure sensor positioned in fluid communication with the oil passage; and,

a control system for receiving information from the oil pressure sensor and providing an output signal to control operation of the electric motor when the oil pressure is below a predetermined level.

2. (Original) The system as recited in claim 1 wherein the control system is selected from at least one of an engine control unit and an electric motor controller configured to deactivate the electric motor when the oil pressure is below a predetermined level.

3. (Original) The system as recited in claim 1 wherein the oil pressure sensor is attached adjacent an oil inlet to the center housing to be in oil flow communication with oil entering the center housing.

4. (New) A turbocharger control system comprising:

a turbocharger comprising:

a shaft having a compressor attached at one of its ends and a turbine attached to its other end, the shaft being rotatably disposed within a center housing and carried by a bearing assembly;

an oil passage extending to the bearing assembly to provide lubricating oil to the bearing during turbocharger operation;

an electric motor positioned adjacent the shaft for controlling the rotation of the shaft;

an oil pressure sensor positioned in fluid communication with the oil passage; and

a control system operatively connected to the oil pressure sensor and providing an output signal to the electric motor to control rotation of the shaft based on detected oil pressure.

5. (New) The turbocharger control system as recited in claim 4 wherein the electric motor is disposed around the shaft, and wherein the oil passage is disposed through the center housing and the pressure sensor is connected to the center housing.

6. (New) The turbocharger control system as recited in claim 4 wherein the control system is an engine control unit.

7. (New) The turbocharger control system as recited in claim 4 wherein the control system is an electric motor controller.

8. (New) The turbocharger control system as recited in claim 4 wherein the control system includes a stored predetermined minimum oil pressure.

9. (New) The turbocharger control system as recited in claim 8 wherein the control system operates to stop operation of the electric motor when the detected oil pressure is below the predetermined minimum oil pressure.

10. (New) The turbocharger control system as recited in claim 8 wherein the control system operates to cause operation of the electric motor when the detected oil pressure is above the predetermined minimum oil pressure.